IsimSoftware Animation Software

IsimSoftware Animation Software remains one of the most widely used stop frame animation programs in education and amongst amateur enthusiasts. With the release of IsimSoftware Animation Software, we've ensured it retains the ease of use of the original software but now has many new features allowing animators of all ages and levels of expertise to create professional looking films.

System Requirements

A PC running Windows XP Service Pack 3 or later, .NET 4 framework, Windows Vista Service Pack 1, Windows 7, Windows 8 or Windows 10 or higher.

15MB of free hard disc space, a minimum of 1GB of memory.

Installation

- IsimSoftware Animation Software is only available from our download server accessible through our website;

    http://www.isimsoftware.com

Getting Started

It's easy to start creating a stop motion movie and this quick start tutorial will guide you step by step through the process.

Once IsimSoftware Animation Software has been installed, and a [suitable camera](#) plugged in, you are nearly ready. Now you just need something to animate.

1) Launch the IsimSoftware Animation Software software from the *Start* button or *shortcut* in the normal way for your computer.

2) The first time you run IsimSoftware Animation Software it should default to the Capture screen.

The IsimSoftware Animation Software Capture window is divided into a number of areas:

The Preview Area - displays your animation. If you are in Capture mode, it will display what your camera is currently pointing at.

The Timeline - is at the bottom of the window. Each time you capture an image it will appear in the timeline as a thumbnail picture. This allows you to quickly ensure that you have not inadvertently captured your hand in a shot in your eagerness to create your masterpiece and if you have, you can delete the frame by clicking on it in the timeline and pressing the delete or backspace key on the keyboard, or click on undo. Then just take the picture again. The timeline can contain different types of tracks but to start with there are only two, a capture track and an audio track.

On the left hand side of the timeline you will see symbols next to each track.

 Capture track, denoted by a camera symbol.

 Audio track, denoted by a speaker symbol.

Tool Panel - Down the left hand side of the window is the tool panel. The tools available will vary depending on which mode you are in but in the Capture window they are;

- the name of the camera or cameras plugged into the computer.

- the orientation of the image e.g. No rotation, Flip Horizontal, Flip Vertical or Rotate 180 degrees.

- Importing Stills

- Time Lapse

- LIve Chroma Key

- Onion Skinning

Selecting some of the options opens additional control panels, but we will look at these in more detail later.

Editing View - You can select from a number of different Tabs to change your editing view. By default those available are **Capture**, **Timeline** and **Audio**. These are all dealt with individually later in this guide.

Initially we are in the Capture view, but you can navigate back to the Clips and Project views using the Back button in the top left corner of the menu bar.

Information is also provided regarding the project and clip that you are currently working on. In this example the project is called **hillside1** and the clip is **Scene1**.

Back Button

If you are in the capture screen the back button is labelled **Clips** and clicking it takes you to the Clips view.

If you are in the clips view the back button is labelled **My Projects** and clicking it will take you to the Projects view.

Home menu - this gives you access to;

- Checking for updates

- The Manual

- About, details pertaining to the version of IsimSoftware Animation Software you are using.

Project Menu

Project Settings opens the project settings screen and is dealt with later in this guide.

Undo and Redo

IsimSoftware Animation Software supports multiple undo and redo.

You can undo and redo any actions that you undertake for example, if you inadvertently delete a frame, you can undo the action and the frame will reappear. Undo and redo will be highlighted when they can be used.

Undo and Redo buttons are always available and available through the keyboard shortcuts of;

Ctrl Z for undo or this button

Ctrl Y for redo or this button.

Back to the animating….

3) Click on the *Capture button* to capture a frame. You will hear the sound of a camera shutter closing as the picture is captured.This sound can be turned off using the volume control of your computer.

4) Next you need to move the character you are animating a small amount to create a realistic action, this comes with practice. To ensure that they get just the right amount of movement in between each frame, animators use a technique called onion skinning, and IsimSoftware Animation Software fully supports this. Click the link for more information on onion skinning. Once you have moved your character, take another frame using either the capture button or the number key 1 on the keyboard.

5) Move the character again, taking care not to knock either the camera or your character, and take another frame. Repeat this procedure until you have captured about thirty frames.

6) You can now review your animation;

   🐧   Click on the *Skip to start* button to take you to the first of your captured frames.

   🐧   Click the *Play* button. The sequence will playback in the preview area.

At IsimSoftware Animation Softwares default settings, you will need to capture at least 12 frames (15 for NTSC) for every second of animation. With thirty frames, you have less than three seconds of playback so don't blink, it is going to be quick!

7) You can now continue and capture the rest of your frames.

Saving

You do not need to worry about saving your project as IsimSoftware Animation Software has been automatically saving it whilst you have been animating. This means that you should never loose any of your animations again.

The animations are stored in your 'IsimSoftware Animation Software Projects' folder located by default, in your My Documents folder on your computer. This folder will have been created automatically when you started your first project.

Each time you create a new project, a new project file will be created automatically.

My Projects

To access your projects click on the back button in the tool bar. The label on this button changes to either **Cips** or **My Projects**, depending on your current location but does not appear if your are in the Projects view window.

The projects are listed in the main window.

Each project will be given a 'default name' when it is created i.e. Project1, Project 2 and so on.

You can change the project name to be more meaningful by selecting the project, and then click on its name and type in the new one or once the project is selected click on the Rename option in the tool panel on the left hand side of the window and again enter your new project name.

Information about the project is listed below the project title, the number of frames in your animation and the date that it was last modified.

New Project
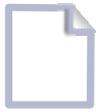
To create a new project;

☎ Select *New Project* in the tool panel on the left hand side of the window.

A new project is automatically created and you will be taken straight to the capture screen to begin animating. Should you wish to change the name of your project, just return to the Projects window.

The new project will be the last in the list and you might need to scroll down to see it.

Importing and Sharing Projects

You can import and share projects with other IsimSoftware Animation Software users.

Importing - If you wish to import an IsimSoftware Animation Software project, then select the Import option from the tool panel. An explorer window will open allowing you navigate to the project you wish to import. You will

only be allowed to select IsimSoftware Animation Software projects, including projects created using previous versions of IsimSoftware Animation Software. It is also possible to import and use projects created on the Mac OS X version of IsimSoftware Animation Software.

Sharing - Click on the project to be shared in the Projects window and then on the Share option in the tool panel. An explorer window will open allowing you to navigate to the where you wish to save the project. You can also enter a name for the shared project before clicking on the Save button.

Opening a Project - Any project that appears in the My Projects list can be opened and edited.

Select the project you wish to open and then click on the **Open** option in the tool panel or you can double click on the project itself.

- If the project contains only one clip, then you may be taken straight to the Capture window.

- If the project contains more than one clip then you will go to the Clips window where you can then choose which of the clips you wish to edit.

Export a Project

Once you have finished your animation you can export it as a 'movie' file.

You can export by choosing *Export* from the Project Menu option or by selecting the project from the list in the Projects window and then click on the Export option from the tool panel.

The Export preferences panel will appear allowing you choose the *Format*, *Size* and *Output* of your movie.

Format:

Windows Media Video - File loads in to Movie Maker and Live Movie Maker allowing you to undertake additional editing.

Uncompressed AVI - File will load into most video post production tools.

Note that files you export may be quite large.

Size:

You can export the video files in a number of sizes;

320 x 240, 640 x 480, 960 x 720 and 1440 x 1080, pixels

Output:

Single video - exports the whole animation as a single movie file

Separate clips - exports all the clips individually.

Once you have made your selections, click the Export button. You'll then need to browse to the location on your computer where you want the file to be saved.

Exporting may take a few moments, depending on your choices, how long your animation is and the performance of your computer, please be patient, it will be worth the wait.

After the animation has been exported you can choose to;

• Open the folder where it is saved.

• Close the export panel.

• Play the video.

Rename

To rename a project select it from the list and then either click on the project title and enter a new name, or choose *Rename* from the tool panel.

Delete

To delete a project, select the project from the list and then the *Delete* option from the tool panel. You will be asked to confirm your choice and the project will be deleted.

Clips

Animations and films are not generally filmed in one long single session. They are normally shot as separate 'clips' or parts of scenes, edited and then 'spliced' together.

IsimSoftware Animation Software supports the idea of clips and you are strongly encouraged to shoot your animations as a series of separate clips. Shooting your animation in this way is advantageous. Not only can you shoot your scenes in any order but it also means that if using the chroma key features, you can use different background pictures and movies in different clips or scenes.

The example above shows an animation comprising of seven clips. Each clip can be given a name, this might be a scene name or refer to an action on your storyboard. Each clip also shows the number of frames that it contains.

Clip Tool Panel

New Clip

Creates a new empty clip in your project and automatically names it with the name Clip and a value, e.g Clip 002.

Edit clip

To add to or edit a clip, first select it and then choose *Edit clip* from the tools panel, or alternatively you can double click on the clip. You will then go directly to the capture window.

Rename clip

To rename a clip, select it and then either select the clip title and enter a new name or select *Rename* clip from the tool panel and you can then rename it.

Delete clip

Select the clip you wish to delete then the *Delete clip* option from the tool panel. You will be asked to confirm your choice and the clip will be deleted.

Transition

Transitions can be added between clips.

Select the clip to add the transition.

A tool panel item, *Intro transition* will appear and chose from the options. The transition symbol will now appear in front of the clip.

To remove the transition, select the clip and choose ***None*** from the transition options.

The Clips window also has a preview screen where you can playback your animation.

Using the Scrub slider

Above the playback buttons, you can 'scrub' to any point in your animation, and play from that timeframe or step though it if you wish using the arrow keys.

Project Settings

Project based preferences can be applied to individual projects and are chosen in the Project settings option.

This is accessed through the *Projects* button and will be applied only to the project you are currently working on.

Base frame rate S Frames per second

This is determined by the number of frames per second and can be set to 24fps, 25fps or 30fps. This is not necessarily the rate you will be shooting at but is used to calculate how many frames need to be exported if for example you wish to shoot in '2's'. This rate is set in the Clip Settings.
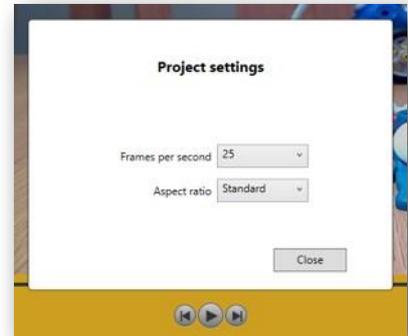
- 24fps - This rate is used mainly by filmmakers.

- 25fps - This is the predominant video system used in the UK and Europe, and many other countries, and refers to 25 frames being transmitted every second. This is known as PAL (Phase Alternating Line). This is the default setting for IsimSoftware Animation Software.

- 30fps - The transmission speed used in North America and some Pacific areas. This system is known as NTSC (National Television System Committee.

More information on frame rates can be found later in this guide.

Aspect ratio

The aspect ratio of an image is the ratio of the width of the image to its height, expressed as two numbers separated by a colon. Two common aspect ratios are 4:3, the standard universal video format of the 20th century, and 16:9 (widescreen), universal for high-definition television and European digital television.

IsimSoftware Animation Software can use both formats but you will need a widescreen camera to take advantage of the 16:9 format.

Capture

The Capture Tool Panel

Select Camera

Allows you to change the camera that will be used to film your animation clip.

Camera Rotation

This controls orientation of the image in preview and is very useful when the camera is mounted on a camera stand e.g. No rotation, Flip Horizontal, Flip Vertical or Rotate 180 degrees.

Camera Resolution

Allows you to change the resolution of the captured image. Only resolutions supported natively by your chosen camera will be displayed. The higher the resolution the better the image will generally be but, the images you capture will be larger and therefore take up more space. This may slow your computer down, especially lower specification machines.

Camera Settings

Your camera may also allow you to change, Brightness, Contrast, Gamma, White Balance and other variables. Some can be automatically set by clicking on the Auto check box in the panel.

By default your camera settings will not be set to the highest resolution it could use.

Import Stills

You might wish to add still images to your capture track. These might be images from the internet or you might wish to import images from an animation you have taken on a digital still camera and then edit them in IsimSoftware Animation Software.

- Select *Import Stills...* from the Advanced options. An explorer window will open allowing you to navigate to the folder containing the pictures.

- Select all the pictures you wish to import and confirm with the Open button. The pictures will then appear at the end capture track.

Don't worry if there are some in the wrong place as you can click and drag frames from one place to another in the timeline. If you need to delete a picture, select it and then press either the Delete or Backspace keys on the keyboard

Time Lapse

Time lapse allows you to capture a frame automatically after a preset time interval has elapsed. It is especially effective for observing objects that change very slowly over long periods of time, for example plants growing, fruit decaying, clouds forming.

Please refer to the section on Time Lapse for further details.

Onion Skinning
What is it?

Onion skinning is a technique with roots that go back to the early 1920s when Disney™ animators would create each frame of their animations on different transparent sheets, or gels. These early animators came up with onion skinning as a way to ensure that these individual gels lined up properly to create a seamless animation.

The process starts with the first frame of the animation where the animator draws an outline of the animated character, to which no colour is added. A second gel is laid over the first. In the second gel, the animator re-draws the animation, but moves the character slightly into the position necessary for frame two of the animated sequence. The advantage of this process is that you can see the previous position of the animation you are drawing through the transparent gels.

The process is repeated by adding additional gels, one on top of the other. Each gel is a frame of the animation. By holding the gels to the light they could see all the positions of the animated character in one view.

When you create a flick book you are doing something very similar.

IsimSoftware Animation Software uses this technique allowing you to view the progressive movement of an object, essential when trying to gauge the distance to move objects from one frame to another.

Each time you capture a new frame it is added to the end of the clip and the frame selection will advance so that the new frame will become part of the selection. The preview will now show the feed from the camera. If you choose to use the onion skin it will then show the selected frame and the feed through the camera overlaid. Until you move the objects being animated you might not see the onion skinning effect.

A maximum of five frames and the feed from the camera may be onion skinned.

You may also find this feature useful if you inadvertently move your model or camera, allowing you to reposition either with accuracy.

Selecting the Onion skin

Onion skinning can be used in the Capture window.

Select the disclosure arrow next to **Mode** and from the menu choose how many frames you wish to use in your onion skin. You can choose from one to five frames.

You can change the relative opacity of the camera to the selected frames by using the Balance slider control. This slider is only enabled when the view is set to onion skinning. To the left will enhance the captured slides and to the right the live feed from the camera.

Toggling the Onion Skin

You can quickly toggle between the last captured frame and the live feed by pressing Q key on the keyboard.
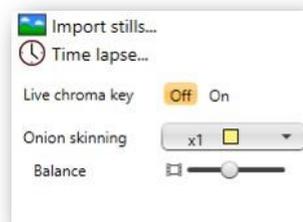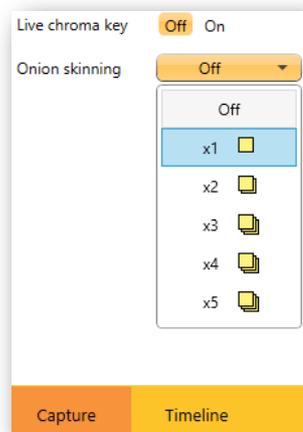
Live Chroma Key

Please refer to the section on Using the Chroma Key for more details on using the chroma key mask.

The live chroma key feature allows you to replace a colour in your preview window with a mask to show which areas will be replaced with a background picture or movie. The mask displays as a white and grey chequer board which can be seen in the preview windows where the selected colour has been replaced.

The live chroma key is made active by selecting the *On* button and deactivated by selecting the *Off* button.

The colour to be replaced by the chroma key mask can be seen in the colour well. By default it will be green.
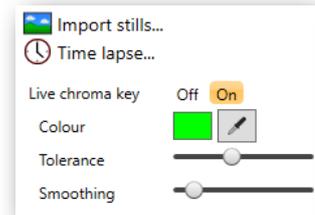
To change the colour:

- 📷 Click on the pipette tool.

- 📷 Move the mouse pointer into the preview screen. As the pipette tool moves in this part of the screen, the colour in the colour well changes to the colour below the tip of the tool and the areas being replaced by the mask, will have a chequerboard fill.

- 📷 To confirm the colour, click the mouse.

Tolerance

The slider enables you to set a tolerance for chroma key colour. Ideally you will want to set this to the lowest setting, so that all the background is shown. If you set it too high you may find that some of your foreground subjects start to disappear. If you find that you need to set it very high, it is probably because your chroma key background is not well or evenly lit. Please refer to the section Chroma Key Backdrops for tips on using a chroma key background.

Smoothing

The Smoothing slider enables you to smooth off the edges of your foreground so eliminating some of the jagged edges around the subject.

Timeline

The timeline is located at the bottom of the window in all the editing modes.

The timeline contains tracks, and by default, a new project timeline will contain a capture track and an audio track.

The timeline has a frame number scale so that you can see exactly which frame you are working on at any time and a playhead visible during playback and editing.
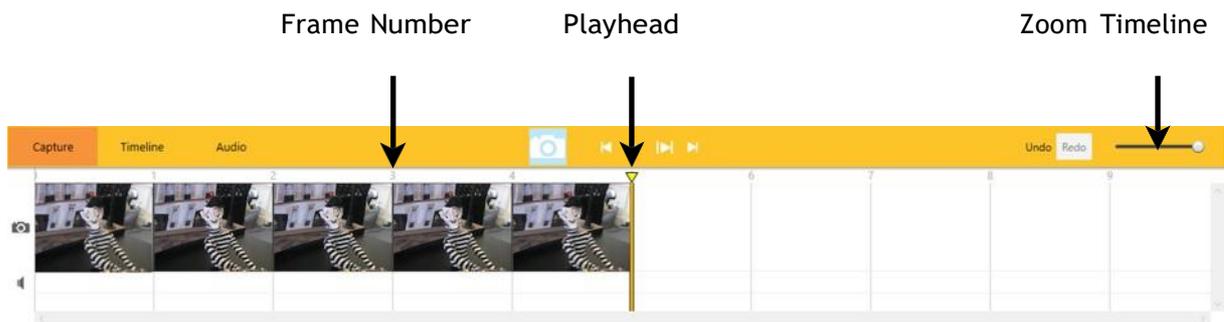

In some views the playhead can be used to scrub through your animation, left and right, using click and drag

Double clicking at any point in the timeline will cause the playhead to immediately jump to that location.

The timeline can also be zoomed using the zoom control. This allows you to quickly navigate to captured frames as well as making copying and extending tracks easier.
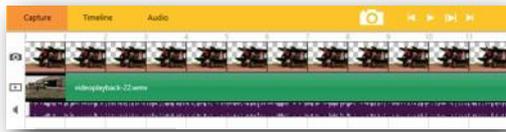
No Zoom
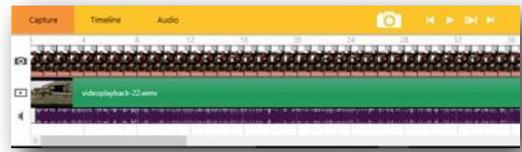
Zoomed out

The Timeline also supports:

 Drawing track - <u>Sits in front</u> of the captured track and enables you to you draw objects using the tools, add text and import images to it, especially useful in removing rigs when using the chroma key feature.

 Background Image Track - <u>Sits behind</u> the captured image track. It can be used for importing backgrounds that can be used with the <u>chroma key</u> feature. Effects can also be applied to the background.

 Audio Track - Record your own audio directly in IsimSoftware Animation Software and import sound files to your animation. You will need a microphone.

 Video Track - Similar to a background track except that you can import video to be used in the background when using the chroma key features in IsimSoftware Animation Software.

 Titles Track - <u>Sits in front</u> of all other tracks and allows you to overlay text onto tracks. Can be used for titling, sub titling and crediting your animations.

There is no limit on the number of tracks that you can add to a single animation but you should be aware that the more tracks that are added the slower the response of your computer might be as its resources are used up.

Adding New Tracks

Click on the Timeline tab in the tool bar at the top of the window.

You will see the list of types of tracks that can be added to the timeline in the tool panel on the left hand side of the window.

The timeline tracks can be visualised as separate film tracks that can be layered one on top of the other. Conceptually, some tracks are 'in front' of the captured image track, others will 'be behind' the captured image track. The diagram below visualises this and shows the hierarchy.
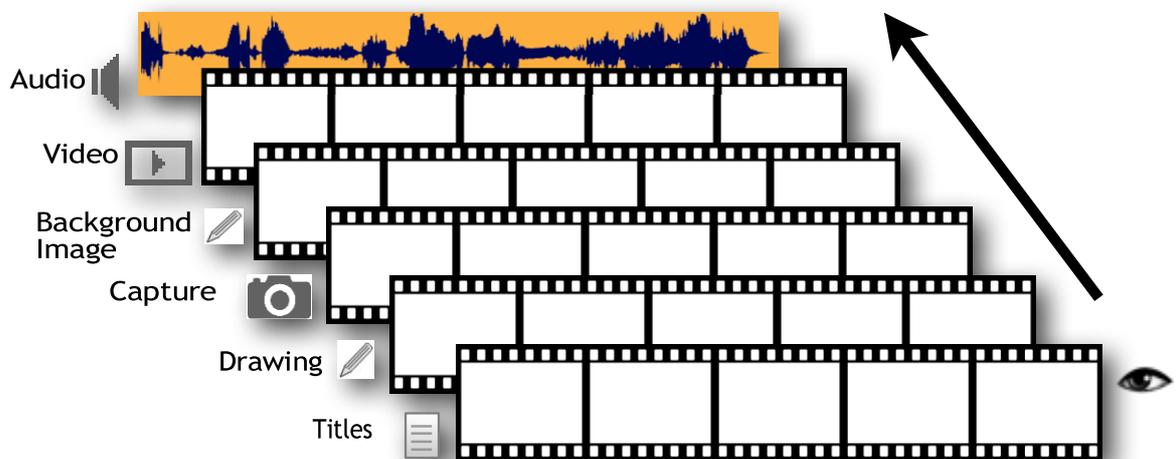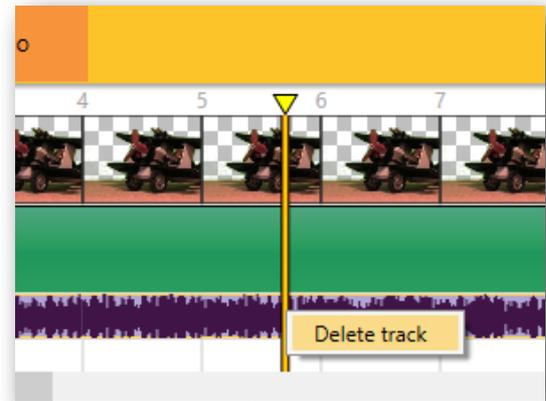

Tracks hierarchy

Deleting Tracks

Tracks can be deleted from the timeline by right clicking on them and confirming the *Delete track* with a left mouse button click.

The capture track cannot be deleted from the timeline.

Clip Settings

The effective frames per second can be controlled for each individual clip.

The slider controlling the number of frames you are able to capture automatically snaps to presets. If you are capturing to the UK digital video standard of 25 frames per second, the slider will allow;

25 fps (working in ones)

12.5 fps (working in twos)

8.33 fps (working in threes)

6.25 fps (working in fours)

on the other hand if you are shooting to the NTSC standard of 30 fps, then the presets are;
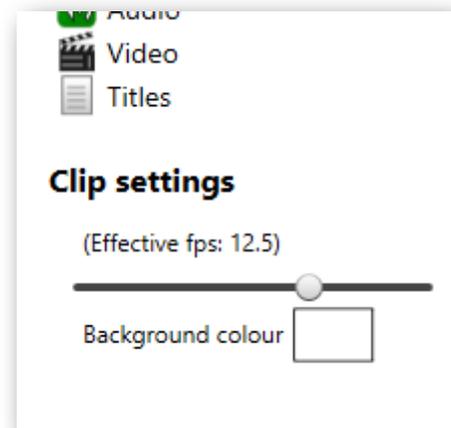
30 fps (working in ones)

15 fps (working in twos)

10 fps working in threes)

7.5 fps (working in fours)

Ordinarily we would suggest that you use the 'working in twos' value unless you have reason to do otherwise. This is the default setting within IsimSoftware Animation Software.

Chroma Key Introduction

Using the chroma key composition tool within IsimSoftware Animation Software allows you to combine a background image with your animation in the foreground. This can either be a still digital image or a movie file. Use of the chroma key can add real depth to your animation and helps to bring it to life.

Traditionally in films and television chroma keying is done against either a green or blue background as these colours are the most least like human skin tones.

In digital animation green has become the preferred colour to use. This is because digital cameras retain more detail in the green channel and it requires less light than blue. Green also has a higher luminance value than blue and in early digital formats the green channel was sampled twice as often as the blue, making it easier to work with.

 In reality the choice of chroma colour is dependent on the colours used in the characters in your animation. For example if you are animating green characters, using a green screen would mean that they too would disappear when the chroma key filter is applied!

IsimSoftware Animation Software has been designed to allow you to choose any colour as a chroma key background, though we highly recommend using either green or blue wherever possible. This manual will use the term 'green screen' when referring to using the chroma key feature.

The chroma key mask, is the area that will be replaced with a background picture or movie in your finished animation. It is shown in the capture track by replacing the area to be masked with a grey checkerboard, if no background has been loaded, this is the matte.

Lighting

The most important challenge when working with chroma key is ensuring that the screen is evenly lit and avoiding:

- Shadows or cold spots which are darker areas on the chroma key screen.

- Hot Spots areas which are brighter than the rest of the screen.

An evenly lit screen gives a smaller colour range to be replaced which will in turn give far better results. Natural night from a window gives some of the best light possible though you may lose some of this if you are animating late into the day and don't forget the sun moves round.

Try to choose a material for your chroma cloth which is not shiny as it tends to reflect the lighting, a matt surface is much better, and is thick enough not to let light through from the back and so give different coloured areas. Attaching your chroma key screen to a board is a good way of avoiding this.

If you are using artificial lighting then try to get lamps that give soft diffuse light rather than a strong direct beam. Getting lighting correct can be a lot of trial and error, but the diagram below might help when you are creating your set and trying to light it.

The graphic below shows an ideal lighting solution. Ordinarily we would not need to go to this sort of configuration to get the lighting correct for animating. Just make sure that your lighting is uniform and try to avoid shadows.
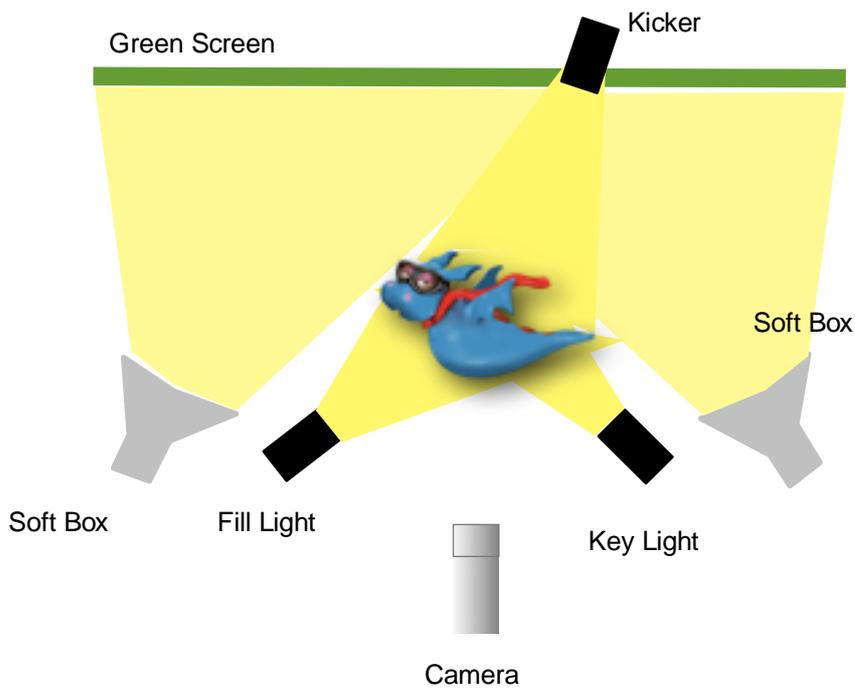
The two Soft boxes are set at an angle of about 70 degrees from the screen.

Using Chroma Key

In IsimSoftware Animation Software the chroma key can be applied in two ways:

- Live - Which will apply the chroma key effect whilst you are capturing frames.

- Post Filming - Which will apply the chroma key effect to frames you select in the timeline.

There is no difference in how you choose to apply the chroma key layer, though working in the live mode will allow you to see the chroma key mask being applied to each frame as you capture it. This makes it easier to ensure that your characters are in the right place during filming.

Using Live Capture Mode

The chroma key function can be found in the **Advanced** settings of the **Capture** menu.

> 🔵 Ensure that IsimSoftware Animation Software is in Capture Mode.

The orange highlight on the Live chroma key, shows the currently selected option (so here chroma key is shown to be on).

> 🔵 Click on **'On'** to enable live chroma.

> 🔵 Using the pipette tool, select the colour you wish to use as your chroma key from the image preview on the capture screen. (This is the image coming in from your live camera)

You will find that black, greys and whites are ignored the colour needs to discernible.

The chroma mask or matte will be applied to the area you have chosen on each new frame you capture or on frames where the chroma key has been switched on.

The matte will show as a chequerboard in the background.

> ▪ When in capture mode, Live chroma key replaces the key colour with a chequer board to show only what is being keyed out.

> ▪ If the chequer board appears and the Live chroma is switched off for a frame then the post chroma key feature has been enabled.

Tolerance

You may find that not all the colour you have chosen is being used in the chroma key mask and notice breakup or 'noise' in the display. This may be down to poor lighting and shadows. IsimSoftware Animation Software has a tolerance slider that allows you to attempt to remove this 'noise' to get a better key for your background image to replace. Ideally the *Tolerance slider* should be as far to the left as possible, as the higher you take the slider the more chance that some parts of the foreground characters may also start to disappear. This is especially so the nearer the colour is to green or grey.

Smoothing

Use the *Smoothing* slider to make the blend between 'live action' and chroma key background smoother around the edges of objects you are filming. Much of this is down to trial and error, so spend some time getting the settings right before you continue filming.

You are now almost ready to begin capturing frames for your animation using the chroma key except, you need a background.

As already mentioned, you can add the background after you have finished capturing frames, but you might want to see the background during filming to use reference points, the Live Chroma Key is ideal for this.

Chroma Key Tips

- Make sure the chroma key screen is flat with no wrinkles

- Make sure the chroma key screen is uniformly lit. Shadows on the screen will cause poor results.

- Don't have the subject to close to the screen as this can cause shadows on the screen.

- Make sure the subject is well lit but not directly from the front as this may also cause shadows to appear on the screen.

- Ensure that the subject does not contain any of the colour of the screen or that area will have part of the background appearing on it.

- Experiment with having the subject slightly out of focus as this can help blend the edges of the subject with the background.

- Shiny subjects can reflect the colour of your background, giving them a slight green tinge and resulting in parts of the character disappearing. Move them away from the background and try to alter your lighting.

Background Tracks

When using a background, whether it be a still image or movie, try to get as high a quality resource as you can, it will look much better in the final movie. If you are capturing in widescreen, then make sure the resource you are using is appropriate.

Backgrounds are a per clip resource. If you wish to use different backgrounds in your animation, then shoot a different clip for each background you intend to use. This keeps things nice and tidy.

If using a movie as a background, then it is preferable that it lasts for as close to the duration of your animated clip as possible, as this will speed up the process and ultimately save space in your file.

Inserting a Background Picture

To use a background in your animation;

- Select the **Timeline** tab from the tool bar.

- Select '**Background Image'** from the tool panel. An explorer window will then open for you to choose an image that you have stored on your computer.

- Choose an appropriate image for your background and select OK.

A new track will appear in the timeline and twelve frames will automatically appear. If you have already captured more than twelve frames, then an equal number of background frames will be added into the track.

Editing a Background Image

Once you have placed your background image onto the timeline you can alter it to create various effects.

- You will only be able to see the results of the resizing and positioning in the preview window if either there are no images captured, i.e. the capture track is empty, or you have applied a chroma key mask to your captured frames. Remember the image in this instance is being used to replace the matte.

Resizing

If the background image is small or you wish to only show part of it, you can alter its position and resize it.

- Select the first frame in the Background track. The image should now appear in preview. If you have already captured a few frames against a green screen then the background picture will be displayed behind your characters.

- Click on the background picture in the preview window and hold down the mouse button. When you now move the mouse, the picture moves as well. If you move it across to the right hand side you will eventually see the edge of your picture. In each of the corners of the picture are handles. These allow you to resize the picture.

Try it out to see the effect.

↪ If you click a second time in the picture, the handles change to a double headed arrow showing the direction in which you can rotate the picture.

While you are doing this watch what happens in the background track, to the other frames. You will see them alter as well.

Try making the picture larger in the preview window using the resizing handles and then position the picture so that it shows only the area you wish to appear in your animation.

Zooming and Panning

You can create the illusion of movement by using pans and zooms on the background picture.

We have provided a demonstration project for you to download called Hillside from our website. (This file contains an IsimSoftware Animation Software project and a background picture)

The effect that we are going to create is of an aircraft flying towards the hill.

☎ Import the project as described on page 18.

We have taken a single frame looking through the wing of the aircraft.

We have got the project nearly ready for you to see the effect, but let's explain how we did it.

The clip needs to last for around 4 seconds and working at the default frame rate of 12.5 frames per seconds, we are going to require 50 frames. (PAL) (12.5 x 4 = 50)

- 🐦 Select the project from the Projects window and then **Open** from the tool panel. The project will load.

- 🐦 Click on the first frame in the timeline. Note a Frame tab has now appeared in the tool bar at the bottom of the window.

- 🐦 By selecting the Duplicate option from the tool panel. A second frame will appear in the timeline. This is a copy of frame 1.

- 🐦 We repeat this action until 5 frames are present in the timeline.

- 🐦 Click on frame 1 in the capture track again and then press and hold the *Shift* key on your keyboard, then select frame 5. You will now see that all 5 frames are selected.

- 🐦 When we now select Duplicate from the tool panel, five frames are duplicated, you would now have ten frames.

- 🐦 Repeat this procedure until you have around fifty frames in total.

To add a background image a track first of all needs to be created.

- 🐦 Select the **Timeline** tab and then ***Background image***. An explorer window will open allowing you to navigate to the location on your computer where you have the background picture. Select it and click OK.

An equal number of background image frames will appear in the new background track in your timeline.
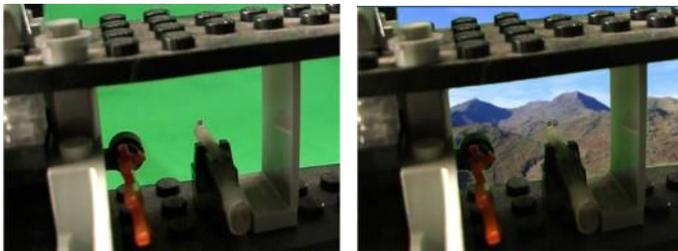

Applying the Chroma Key

Unless you have already switched the chroma key feature on, then your animation will still have the green backdrop showing behind the wing in the preview window

To apply the chroma key to the captured frames you first need to select the frames. This can be done in several ways:

- ☎ Click on the first frame in the capture track that you wish to apply the chroma key effect.

- ☎ Then use CTRL + A to select all frames. All frames should then have have a yellow highlight around them to show they have been selected.

- ☎ Click on the *On* button in the Frames tool panel to turn the chroma key on for all frames. If you have captured a large number of frames, then it might take a little while to composite the images, please be patient, it's worth it.

The preview will then show both the captured image and the background picture with the matte replaced by the background picture.

So from this example   to this.

Once the chroma key has been applied you will see that the background image now sits behind the wing of the aircraft. If you play the clip, nothing appears to happen. In order for it to simulate the aircraft flying towards the hills

In frame 1 you will need the background picture to be resized to be as small as possible and in the last frame, you need to decide how much you wish to 'zoom' and to which point in the picture.

In our example movie we focused on zooming to the top right hand corner of the picture. It can be a bit fiddly but with practice you can get some great results.

This graphic, below, attempts to show what is happening when you alter the size of the background image.

Frame 1, the whole of the picture has been resized so that it is just fitting into the visual area (frame).
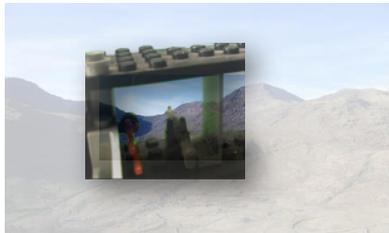
This is an interim frame, about half way through the clip, showing how the visible area has moved as the graphic is being resized. This view is automatically created, but you can at any time select a frame and alter the background picture and IsimSoftware Animation Software will alter the tween either side of it automatically.
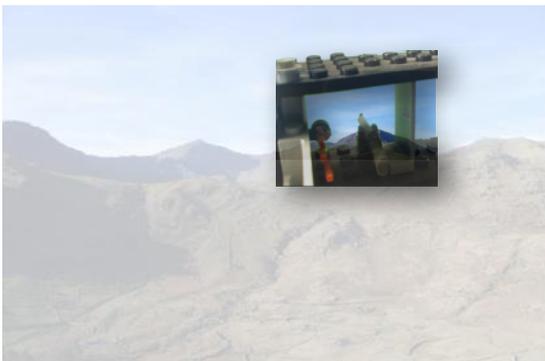
In the final frame of the clip, the background picture has been resized and moved so that the visible area is now just the peak of the mountain. The visual effect is that we have 'zoomed' into the area.

All the interim frames will be automatically updated so that the effect you see in the movie is of the aircraft heading towards the mountain peak.

Check out the video tutorials on our website that show how to create this effect and others.

The background picture can be changed part way through a clip.

- Go to the last frame in the background track and click the thumb button. Drag the button back the point in the timeline where you wish to change the picture.

The preview should now display the last frame in the Drawing view and be selected.

🐑 Move the mouse pointer into the preview screen and click in the area that is being chroma keyed. The End tween button should now be selectable in the toolbox.

🐑 Click on End tween.

🐑 Now click and drag on the thumb at the end of the background track in the timeline to extend the track.

🐑 Select the first of your 'empty' frames

🐑 Choose **Import image...** from the tool panel. An explorer window will open allowing to you to choose the new background picture.

☎ The imported picture will appear in the frame selected in the background track a shown below.

You will not be able to see this picture in the Preview screen until you turn on the chroma key.

☎ Click on the Frame above where the picture has appeared, see above.

☎ In the Frame tool panel, enable the chroma key. You will see the picture appear in the background.

☎ Click on the picture to activate the resizing handles.

☎ Resize and position the picture where you require it.

- ☎ Tween the new background picture for the remaining duration of the animation.

- ☎ It now only remains to turn on the Chroma key for the additional frames.

Adding Objects to the background track

Images, drawn objects and even text, can be added to a background track.

In the example below we can see that there are no images in the capture track, only a Background track with imported picture and an empty Audio track.

We have also imported a spacecraft image in the top right of the preview screen, you can just see part of it. This is a picture downloaded from the internet, that has an alpha channel.

An example movie can be previewed on our website ;

Alien invasion - Creating The Project

In this example, the spacecraft takes off and moves off into the distance, if somewhat a little 'wobbly', on its Earthbound journey.

The movement of the spaceship is very quick and easy to do in IsimSoftware Animation Software.

- Create a new project

- Select the Timeline tab from the tool bar

- Select Background image from the tool panel, an explorer window will appear. Browse to the picture you wish to use.

☎ Twelve frames will be added to the background track. Click and drag on the 'thumb' positioned at the end of the last frame, to extend this track.

Thumb   Zoom
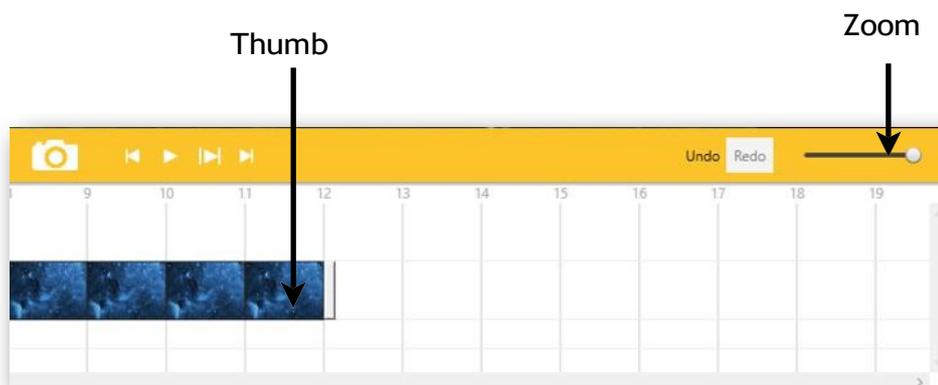
☎ Zoom the timeline back to its original position, to expand your frames again.

☎ Click on frame 1 in the timeline. If you cannot see frame 1, then either use the scroll bar at the bottom of the window or click on the skip to start button. This will give access to the Drawing tools.
The Drawing tab is now selected in the toolbar at the bottom of the screen.

☎ From the Drawing tool panel select
Import image...

An Explorer window will open allowing you to navigate to the image you wish to add to your background, in our animation this was the space craft.

☎ The Select tool is automatically chosen in the tools panel, denoted by the orange highlight. If it isn't then just select it.

☎ Move your mouse pointer into the preview area and select the object you imported. Resizing and rotation handles will become visible. A single click will activate the resizing

handles,a double click the
rotation handles. The
handles allow
you to increase and decrease the
size of the image and rotate it.
Reposition the object by clicking and
dragging on it. Move the object to the position you want it to start in.

- Select *Start tween* from the tools panel, and watch what happens tothe thumbnails in the timeline, the object appears on each frame.

- Click on the last frame in the timeline to select it. You are now modifying just this frame.

- Click on the object you imported and move it to a new position in thepreview window. Watch what happens to all the previous frames as IsimSoftware Animation Software automatically fills in the inbetween frames.

- Use the scroll bar to scroll to another frame and move the object to another location. Again the 'inbetween' frames will be updated

- Go back to the last frame in your clip and click on it.

- Select the object and make the object smaller, and rotate it.

- Select *End tween* from the tool panel. This finishes the tweening.

You do not have to use imported pictures, you can draw your own shapes using the basic drawing tools supported in the tool panel, this includes a text tool allowing you to create 'tweened' captions and titles.

Duplicating Frames

Another powerful feature of IsimSoftware Animation Software, is the ability to duplicate frames in a number of different ways for example, you can duplicate a single or multiple frames that will be inserted after the selected frame.

It is also possible to duplicate a selection of frames and reverse them. This is particularly useful if you have animated an arm wave for example and captured fames for the first half of the wave, and then just want to use the same frames again reversed to show the other half of the wave. Using IsimSoftware Animation Softwares frame duplication, you need only select the frames, duplicate and reverse them.

Duplicate Frame:

To duplicate a single frame;

☎ Click on the frame you wish to

☎ duplicate.Use the keyboard shortcut of
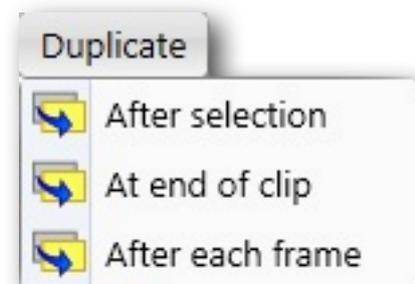
or...   Ctrl D.

☎

☎ Click on the frame you wish to duplicate. Note the Frame tab is now automatically selected in the tool bar.

☎ Choose Duplicate from the tool panel.

From the list that appears, choose where you want the frame to be inserted.

You can also drag the duplicated frame to a new position in the track at any time.

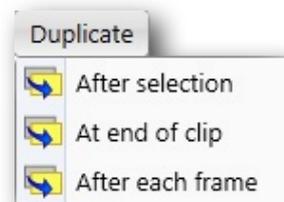Duplicating a Selection of Frames:

To duplicate multiple frames;

☎ Select the frames you wish to duplicate.

☎ Use the keyboard shortcut of Ctrl D. All the selected frames will be copied and inserted after the last selected frame,

or...

🐦 Select the frames you wish to duplicate.

🐦 Choose Duplicate from the tool panel.

🐦 From the list that appears choose where you want the frames to be inserted.

Duplicate

↳ After selection

↳ At end of clip

↳ After each frame

The first two options are self explanatory, the third option is useful if you have selected a number of frames in sequence and want to extend the duration of each frame as it duplicates and adds each frame in sequence. The five frames below show what would happen;

| 1 | 2 | 3 | 4 | 5 |

they would be duplicated like this.

| 1 | 1 | 2 | 2 | 3 | 3 | 4 | 4 | 5 | 5 |

Reversing the Frame Order:

You can choose to reverse the order of the frames you have just copied. This is particularly useful if you have animated an arm waving,
and captured the frames of the arm going in one direction and you want to duplicate the movement in the opposite direction, but you need the order of frames reversing.

🐦 Select the block of frames you wish to reverse.

🐦 Click on the Reverse button in the tool panel.

This can be shown below in the example of a falling ball, the duplicated frames are the ones that are shown selected (blue in the diagram).

These have been inserted after the originally selected frames, producing the effect below:
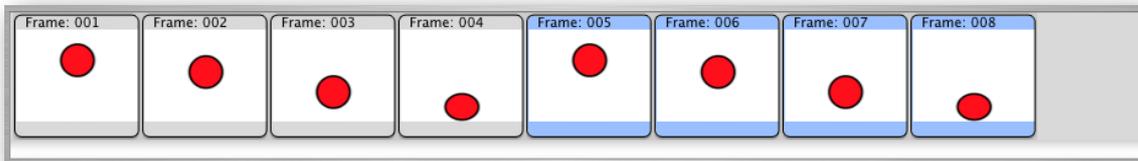
> With the duplicated frames still selected, click the Reverse button inthe tool panel.

The selected frames will be reversed as shown below.
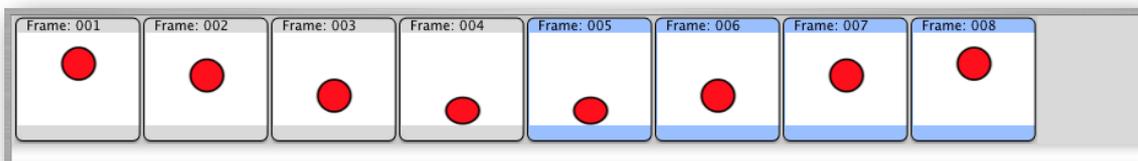
Here you can see that the ball is now appearing to bounce back again. This is useful where you have animated the first cycle of an animation and wish to reproduce it in reverse. Another example might be getting a character to wave. As long as nothing else moves in the shot the wave would be quick andeasy to create.

Remember that after you have duplicated the frames, if you don't get the result you were hoping for, you can always delete frames, undo actions, duplicate single frames again and move any of the frames around.

Drawing

IsimSoftware Animation Software has path based drawing tools. This means that any shapes created in a frame can be easily manipulated and duplicated.

Although IsimSoftware Animation Software is not specifically designed to be a drawing animation application, drawing tools are supplied to allow you to enhance your captured animations add some neat effects and for creating chroma key masks.

Drawing tools can only be used in a drawing track.

There are two types of drawing track in IsimSoftware Animation Software and they each have their own hierarchy in the compositing.

1) **Drawing track** - This sits in front of the captured image track.

2) Background image track - This sits behind the captured image track.

You do not have to have any captured images to use the drawing tracks and their features.

There are a couple of things to remember when you are using the drawing tools.

1. You can only draw into a frame.

This may seem fairly obvious, but it's worth remembering that when you are starting with a new IsimSoftware Animation Software project, there are initially, no frames.

2. You must select a shape, (or a number of shapes), to change their Fill Colour, Line Colour, Line Width or any of their other properties. Use the **Select** tool to select objects you have created.

Drawing Tools

Click on the Timeline button and choose Drawing from the options. The new drawing track will be inserted above the Capture track in the timeline. Twelve frames will be automatically added to the drawing track, unless you have already captured more than this, then an equal number of frames as there are captured frames, will be added.

The drawing track can be extended or shortened by clicking and dragging onthe thumb at the end of the track.

Thumb
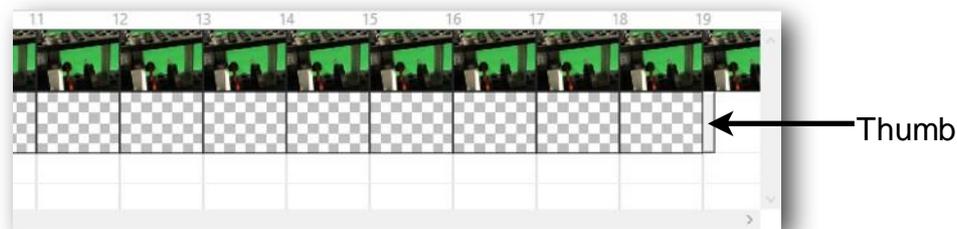
The are a number of tools that allow you to select, edit, create a new shape oradd text.

The currently selected tool is shown by the orange highlight.

Edit object

Select object

Draw ellipse

Drawing tools

Draw rectangle

Draw polygon

Freehand drawing

Text
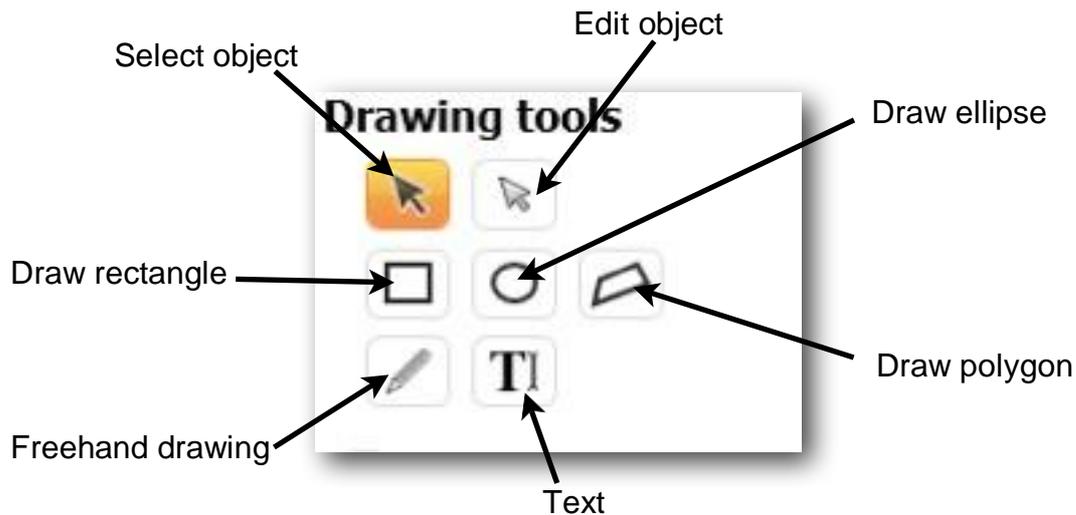
 Select Tool:

The select tool is used to select, move, resize and delete shapes. To select a shape you must click on the shape or the line of the shape in the preview window. By holding down the Shift key you can add more than one shape tothe selection. Any changes you make will then apply to all the selected shapes.

If you click away from a shape and then drag the mouse pointer you can group select multiple items very quickly. When a shape is selected it's bounds are displayed with a black rectangle. The rectangle always encompasses all selected shapes.

The small handles in each corner can be used to resize the shapes and by clicking a second time, rotation handles will appear.
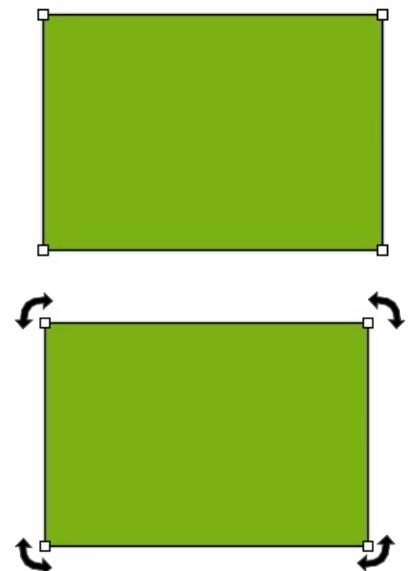
Edit Path Tool:

The edit path tool allows you to move the individual points that make up a path. You use it in a similar manner to the select tool to select a shape, except you cannot select multiple objects when using this tool. When the shape is selected, each path point has a small rectangle over it. You can click and drag these points to adjust the shape.
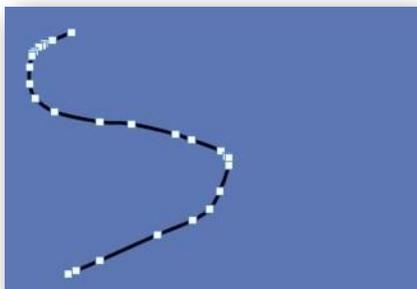
Line drawn using the Freehand Tool, selected with the Edit Pathtool, edit points shown.
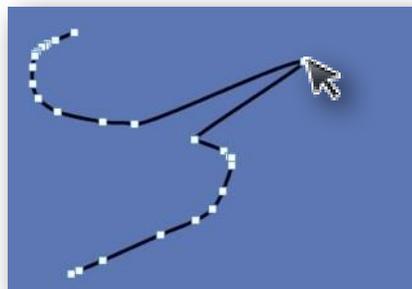
Editing the path

Draw Rectangle:

The Draw Rectangle tool lets you drag out a rectangle. Select this tool, thenclick and drag to create a rectangle.

Draw ellipse:

The draw ellipse tool lets you drag out an ellipse. Select this tool, then clickand drag to create an oval.

Draw Polygon:

This tool allows you to create many sided shapes, it is especially useful for tracing around objects on the captured layer. Click the mouse at the point where you wish to start drawing and then move to the second point and clickagain. A line will automatically be drawn to connect these two points. Continue moving and clicking until you have the desired shape. If youposition the last point very close to the starting point the tool will automatically close the shape.

Freehand Tool:

The freehand tool allows you to create an arbitrary shaped path. Select this tool, then click and drag to draw a path.

T[**Text Tool:**

You can add text to the drawing track. Select the Text tool and then click onthe screen where you want the text to appear. A cursor will appear and flash, you can then start typing. Once you click away from the text the text window is closed. You can however now click elsewhere in the preview and start typing again but each piece of text will become a separate object. The font, and its colour, can be easily changed and size altered by selecting the text box and clicking and dragging as you would a normal drawn object. In fact, text boxes act like any other drawing object allowing resizing, rotating, fillingwith colour or images and tweening.

Fill Colour and Line Colour

Drawn objects can be transparent or filled with a colour or image. The lines can also have their own colour. You need to select the shape you intend tochange by either using the Select or Edit path tool.

The Fill and Line colour controls will now be enabled. You may have to scroll down using the scroll bar on the tool panel to see them depending on your window size.

The fill and line colour of an object can be changed

independently.To change the colour:

- Select the object you wish to modify.

- Click in the colour well to select it and as you do this the colour picker will appear.

- Choose the colour you wish to use in the colour picker.

- Alternatively if you click on the pipette tool and then move the tool across into the preview area. The colour in the colour well changes. To select the colour click the left mouse button.

Line Width

- Select the shape whose line width you wish to change.

☎ Type a value into the text field. The value is in points and limited to values between 0 and 999.

Arrange the Order of Objects

As you create and add new objects or images to your drawing you will notice that each new object or image may appear on top of any previous one. If youhave a number of object drawn and select one and move it around it will be infront of some objects and behind others. I Can Animate allows you to rearrange the order of objects:

☎ Select the objects(s) whose order you wish to change.

☎ Select the Object order button from the Drawing tool

panel. ☎ Choose one of the re-ordering options from the list.

Bring to Front

Bring Forward

Send Backward

Send to Back.

Depending on where the objects(s) are positioned in the layering order will affect which of these options is available.

Grouping Objects

Objects and images can be grouped together. This is very convenient if you have drawn an object which is made up of other objects which you then want to copy or move together.

To group shapes together:

☎ Select at least two objects or images that you wish to group. To select multiple shapes hold down the Shift key while clicking to select the shapes or click and drag over all the objects you wish to include in the group.

☎ Once two objects are selected the Group option becomes available in the Tool panel. Having made your selection, select Group.

When objects are grouped, if you select any where within the group, then all objects in that group are selected. Any changes you now make to one object will apply to all objects in the group. If you want to just make a change to oneobject in the group then you will need to ungroup them first.

Ungrouping Objects

To ungroup a group of objects:

☎ Select the group of objects you wish to

ungroup. ☎ Select Ungroup from the Tool panel.

Deleting Objects

To delete a shape;

☎ Select the object you wish to delete.

☎ Press either the Backspace or Delete key on the keyboard.

Copy and Pasting Objects

All the drawn objects can be copied and pasted within a frame, from one frame to another and from one frame within one clip to a frame in another clip.

Uniquely in IsimSoftware Animation Software, there is also a very quick way to copy objects and then make the object appear to move within a clip.

Simple copy and paste;

☎ Click on a frame in a drawing track, the Drawing tab should now be selected and you have access to the drawing panel.

☎ Select the tool you wish to draw with.

☎ Click in the preview window and

draw.

☎ Click on the Select tool and then on the object you wish to copy in the preview screen. It will become selected.

☎ CTRL and C copies the selected object to the clipboard ☎

Select the frame that you are going to copy to

☎ CTRL and V will paste the object to that frame.

Copying over Multiple Frames

This powerful feature is best shown by recreating the classic ball bouncing animation...

☎ Create a new project.

☎ Select **Timeline** from the Tool bar and then **Drawing**. The Drawing track will appear in the timeline above the Capture and Audio tracks,which are there by default, and contains 12 frames.

☎ Using the Zoom timeline slider and the thumb at the end of the frames, extend the number of frames in the timeline to 60.

☎ Reset the Zoom to normal.

☎ Click on frame 1 in the drawing track.

☎ Use the ellipse tool and the rectangle tool to draw a ball and 'floor', you can colour them if you wish.(See diagram below). The Ball should be in the top left hand corner of the window and the floor, well I am sure you can work that one out.

☎ Select both objects (Shift and click), note the *Start tween* option isnow active in the tool panel.

☎ Select *Start tween* and watch what happens in the timeline. Each frame should have the identical drawings in it.

☎ Scroll through to the frame about half way through your sequence, in this example frame 30, and then click on it to select it.

☎ Using the *Select tool*, click on the red ball in the preview area and give it a slightly compressed/squashed appearance and then drag it

across to the middle of the window and down until it touches the floor. Watch what happens in the frames to left and right, in the timeline.

🐑 Scroll to the last frame and, using the Select tool, select the ball and change its shape back to a circle and then move it back up the screen to the top right hand corner of the window.

🐑 Click on **End tween** in the tool panel.

🐑 Click on the **Skip to Start** button, and then replay your animation.

Audio

Audio Introduction

IsimSoftware Animation Software lets you add sound directly to an animation and you can add an unlimited number of sound tracks to IsimSoftware Animation Software.

Adding sound opens up some exciting opportunities. You can choose to;

- Importing a sound file from your computer or other source such as the internet.

- Record directly into IsimSoftware Animation Software.

Although you can add an unlimited number of sound tracks, doing so mightmake editing confusing, create very large files and slow older, slower computers down.

Adding Additional Audio Tracks

Select the Timeline tab from the tool bar.

From the 'New Track' options choose Audio.

This will place a new audio track into your timeline.
Repeat this as many times as you need to.

An audio track is clearly distinguishable in the timeline as it has the speaker symbol next to it and sits just below the capture track by default.

Importing Audio files into the Audio Library

Each animation that you create has it's own audio library. The audio files can only be used with clips withinthe same project.

To import an audio file;

Select the *Import into library...'* option from theAudio tool panel.

An explorer window opens, allowing you to navigate to the audio file you wish to import.

Select the file, then click on OK and the file will appear in your library. If you reload a project and find that one of the audio tracks in your library is greyed out, this indicates the audio file is either corrupt in some way or missing and will need to be reimported.

Adding Audio to the Timeline

Audio files can be added anywhere along the Audio track in the timeline.

Make sure there is an Audio track in the timeline, you will seethis symbol next to it. If no track is present, then you will need to add an audio track.

Click and select the audio file in the library you wish to use.

🎧 Drag to the audio file to the position you require it in the timeline and release.

The audio file will appear as an purple band in the timeline track, with an audio wave form showing the rise and fall in sound level.

You do not have to be accurate with where you drop the audio file to begin with as they can be moved once they are in the timeline.
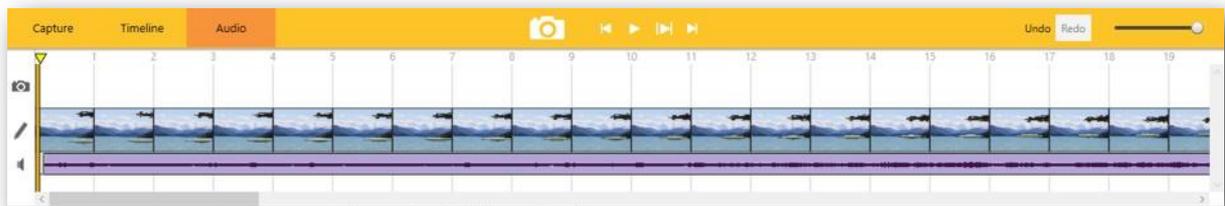
Timeline with sound file

Moving the Audio File

If you need to move your audio file click and drag on it in the timeline, you can move it to the left or right, or even down to another Audio track if you have created more than one.

### Deleting an Audio File

To delete an audio track you can either;

• right click on the audio track and confirm the delete. This deletes the whole track,

• or alternatively, click and drag on the specific audio file and drag it away from the track, and then release the mouse button. The selected file only will be removed, the track remains

Imported audio files cannot be deleted from the Audio Library as they may be used in another clip or another part of the same clip.

Changing the Duration of the Audio Clip

To save space and keep file sizes small, you should always only import the sound files you are going to use and they should only be as long as is needed.There are a number of free audio software titles that you can edit sound filesin, Audacity is probably the most well known.

IsimSoftware Animation Software does allow you to change the duration of a sound file by allowing you shorten the file from its beginning or end. The sound file is not altered in any way, only the time it plays for.
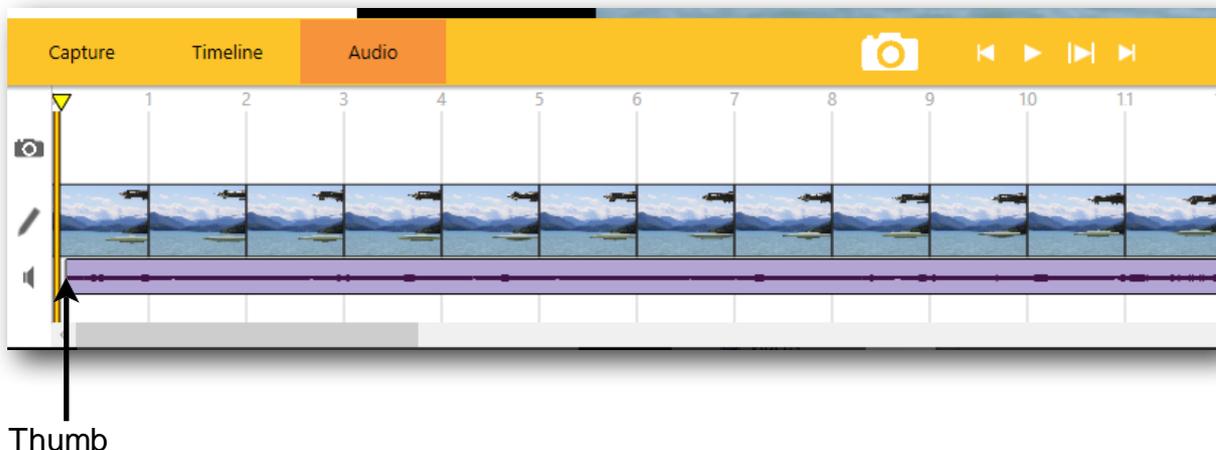
Thumb

At the beginning and end of each Audio clip is a *Thumb*. If you move your mouse pointer over it, it will change to one of the symbols shown below;

The audio clip can be shortened or extended.

The audio clip can only be shortened, you are at the beginning of the clip.

The audio clip can only be shortened, you are at the end of the clip.

Clicking and dragging on the thumb in the direction of the arrow will change the duration of the audio clip.

Recording Audio

You can also use a microphone to directly record soundthat can be used in your animation.

   Select the audio tab in the tool bar at the top ofthe window.

   Choose the microphone you wish to use by clicking on the drop down box underneath Microphone.

A list of available microphones will be displayed, there may only be one.

☎ Select the microphone you wish to use. ☎

Test the microphone.

Audio capture
Microphone
Microphone (Realtek High ▾)

Start recording
Stop recording

As you speak you should see the green bar in the soundmeter begin to fluctuate left to right, depending on howloudly you are speaking. You might need to change the microphones input device settings in your computers control panel to improve the levels.

▣   An audio wave will be shown within the sound track indicating peaks and troughs. In some instances it might appear as a flat line. In these instances the sound has not been loud or strong enough to create the wave. This is not a problem but can make it difficult to then determine where certain sound points are in the track.

☎ Select where in your animation you would like your recording to begin by clicking on the appropriate frame in the timeline. The Playhead should appear at that point.

☎ Click on the Start recording button to begin your recording.

☎ Click on the Stop recoding button to end your recording.

When you stop recording you will see that the audio file has been added to your animation as a new track. You do not have to create an audio track before recording as it will automatically be created as you begin recording.

A copy of the audio file is also placed into the Audio Library and labelled Recording 1. This name will be incremented each time a new recording is undertaken in the project.

Titles

Text and credits can be added to your animation using the '[Drawing tools](#)'. In addition, **Title** tracks can be used to add Scrolling credits, Centred titles and Subtitles.

Title tracks sit in front of all other tracks. Any text you enter into a title track will always appear in front or over the top of captured images and drawings.

Adding a Title Track

From the *Timeline* panel, choose *Titles* from the menu.

An empty Titles track will appear at the top of the timeline denoted by the Titles track symbol.

Click in the Title track in the timeline where you want the titles to start from.

We would suggest that titles start at least 12 frames from the beginning, but for subtitled clips you might want them to begin earlier. You can drag the title clip to a new start position if it is not correct to begin with.

Now choose the type of Titles clip you wish to use;

- Scrolling Credits - Credits scroll from the bottom to top of the screen for the durationset in the control panel.

- Centred Titles - Text will be placed in the centre of the screen, lasting for the durationset in the control panel.

- Subtitles - Subtitle text will be placed at the bottom of the screen, lasting for the durationyou have set in the control panel.

The Tiles track will now contain a green infill from the playhead and a label indicating the type of credit you have selected.

You can begin entering your text in the writeable window of the titles panel. The text will then start to appear in the preview window.

Controlling the Duration

The duration of the text display can be altered using the **Duration** slider in the control panel. After adding a text track;

🐧 Move the slider to the far left. You will see the green text track decrease in length to around 12 fames.

Playing the animation at the standard settings in IsimSoftware Animation Software this would last for 1 second.

🐧 Move the slider to the right and you will see the text track duration extend to 125 frames.
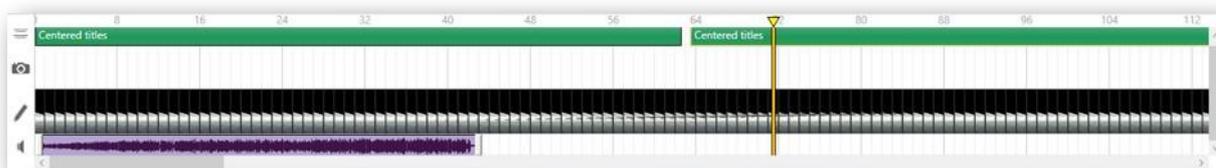
This example has 2 Title clips added to the Timeline track.

Altering the Size of Text

The size of text can be quickly altered using the ***Text size*** slider in the panel. Sliding it to the right increases the size to left decreases the size.
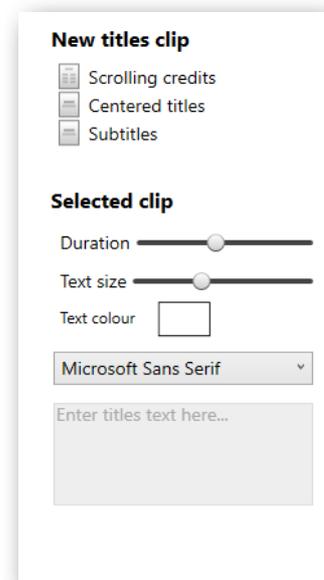
Changing the Font

Beneath the Text size slider is a drop down menu. Click on this to select a new Font from the drop down list that appears.

Changing the Font Colour

The colour of the font can be changed using the colour well.

- 🎭 Click in the Text Colour well.

- 🎭 From the colour palette choose the colour you wish to use.

- 🎭 Click on OK, the new colour will be set for thattitle.

New titles clip
- Scrolling credits
- Centered titles
- Subtitles

Selected clip

Duration

Text size

Text colour

Microsoft Sans Serif

Enter titles text here...
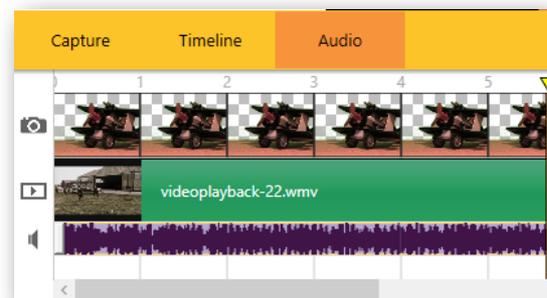
Video Backgrounds

IsimSoftware Animation Software supports adding videos into the background as well as a still image.

If you are intending to use a video as a background you should be aware that this might have repercussions on the performance of your computer and additionally, your animation files and movies that you export may be quite large.

IsimSoftware Animation Software will import Windows MediaVideo (wmv) files and this will be used to replace the chroma key mask in your animation.

IsimSoftware Animation Software does not display the imported video file frame by frame in the timeline. A key frame is shown at frame 1

and the rest of the video is represented as coloured track. In the example above, green.

Importing a Video

You might have already captured frames against a green screen, chroma key, background, and therefore have some idea of playback duration, or chosen a video clip that you wish to animate over. The video clip you import needs to be a similar duration to the animation to keep file sizes small.

To see the movie behind your subject you will need to have captured your animation in front of a chroma key screen.

After capturing;

- Select the Timeline tab from the toolbar at the top of the window.

- Choose **Video** from the list of **New track** options. An explorer windowwill open allowing you to browse to the location of your video file.
Only *wmv* files will appear in the list.

- Select the file you wish to use and then Open.

- The Video track will appear in the timeline.

- Double click in the timeline on frame 1, as thischanges the editing mode to Frames and theFrame tab will become selected.

- Use the pipette tool to select the background colour from the preview window.

- The chroma key may have become selected during this so turn it back off.

- With frame 1 still selected, use the keyboard shortcut `Ctrl A`, to select all the frames in the timeline

- Apply the chroma key again, this time all the frames in the timeline will show the chroma key mask.

Poor lighting will result in a picture breakup showing in your animation, the green backdrop may start to show through.

Use the **Tolerance** slider to try to eliminate noise, but to begin with try to get the lighting correct. The **Smoothing** slider will attempt to blend the edges of your objects with the background, making them less harsh.

Once the chroma key has been applied the movie will appear in the background of your preview. When you playback your animation the movie

will play in the background. You can also use the playhead to scrub through your movie to determine if any of the captured frames require the chroma keytolerance modifying.

On lower specification machines you may find playback is slightly jerky, but your exported movie should play smoothly. Exporting movies will take longerwhen these types of effects and resources are used.

◼ Once you have exported your animation, you could then reimport it touse as a background movie track, overlaying what you have already captured with a new animation, now there's a thought....
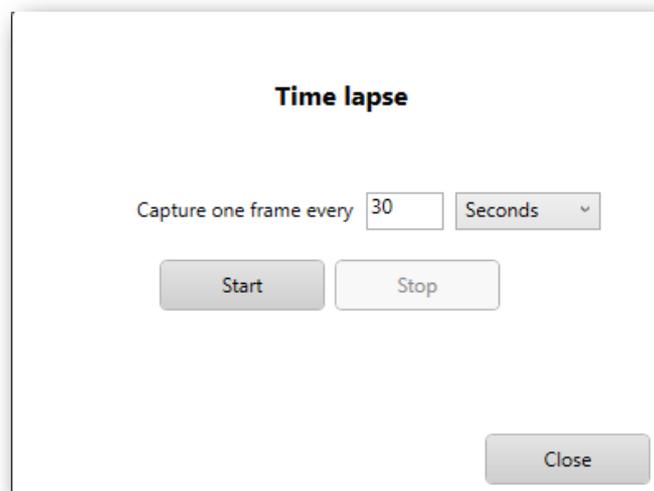
Time Lapse

Time Lapse is a technique whereby the frequency at which frames are captured is much lower than that which will be used to play the sequence back. When replayed at normal speed, time appears to be moving faster and thus lapsing. IsimSoftware Animation Software has a built in Time Lapse facility. This has many useful applications across the curriculum, from watching seeds grow to fruit decaying and filming a sunrise or sunset.

You can only set a time lapse on a single open project.

To use this feature:

- Create a new project.

- On the Capture screen click on the Advanced menu.

- Using the scroll bar , scroll down and under the **Acquire** menu, click on **Time Lapse…**

This will open the Time lapse screen where you can enterthe time interval in the text field and then choose an appropriate time unit to capture over.

Capture times between frames can be as little as 0.1 seconds.

Click on the Start button to start the time lapse. You will be locked out of the other features of IsimSoftware Animation Software during time lapse and the time lapse screen will remain visible until you select the Stop button.

If you do not wish to take any more time lapse then click on the Close button.

The captured frames will be displayed in the timeline. Using the playback buttons you can now review you time lapse.

Increasing or Decreasing the Playback Speed

If you wish to slow or speed up your time lapse clip you can alter the effective frames per second of the clip through the Timeline panel.

You could for example, have 24 hours worth of time lapse taken at 30 second intervals. This would give you;

24 hours, that's 1440 minutes and at a frame taken every 30 seconds,equates to 2880 frames.

By default IsimSoftware Animation Software plays back at 12.5 fps, the duration of your timelapse would be 230.4 seconds or approximately, 3.84 Minutes

25 fps (working in ones) - 1.92 Minutes

12.5 fps (working in twos) - 3.84 Minutes

8.33 fps (working in threes) - 5.76 Minutes

6.25 fps (working in fours) - 7.68 Minutes

IsimSoftware Animation Software will always capture at half full frame rate by default. This is also know as 'working in twos'.

Frame Rates

All types of moving images have what is called a frame rate. This refers to the number of frames that are displayed each second. In cinema films this is 24 frames per second (fps). Television in the UK and many other countries use 25 fps. America, Canada, Mexico and Japan have a format called NTSC and this uses 29.97 (nearly 30) fps.

When you are making a movie you need to think about time and how long you want each clip to last. This means, whether you are working with PAL (25fps) or NTSC (effectively 30 fps), you will need to think about how many frames are required to produce a clip of a given length in time.

If for example, you want 10 seconds of animation and are working in PAL, you will need to capture 25 x 10 = 250 frames, (or 300 for NTSC). That's quite a lot of frames for just 10 seconds of animation.

Professional animators have a technique whereby they are able to cut down the number of movements they need to set up by capturing two frames at once, they then make the movements of the characters twice what they wouldbe normally. If they really want to cut down their workload they can even capture three or four frames at a time, but then the action would appear quite jerky. This is part of a technique called limited animation.

When using a computer, you don't actually need to keep capturing two, threeor four frames, (unless you deliberately want to freeze the image for a moment), instead you only need to capture one frame.

IsimSoftware Animation Software will automatically duplicate your captured frames for you whenit exports them, in effect slowing down the action. The number of frames which it duplicates is what is sometimes called the limiting factor. The higher the limiting factor, the slower your action will appear when played back.

So returning to the mathematics of the number of frames you need to capture; for 10 seconds we need 10 x 25 = 250 frames when exported, by setting the effective frame rate to 12.5 (using PAL) we only need to capture half as many frames, 250 / 2 = 125 frames. The 125 frames you capture and I Can Animate plays back and eventually exports, is automatically doubled to recreate the 250, saving you time. This can be especially useful when working with younger or inexperienced children

If that is still too many then you can set the effective frames per second usingthe slider in the Timeline tools panel to only capture 250 / 3 = 83 frames (8 per second approximately).